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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,005	03/19/2004	Leo A. Almeida	NVL 3223	6985
35391	7590	10/14/2005	EXAMINER	
DEPARTMENT OF THE ARMY AMSEL LG P NVEO 10225 BURBECK ROAD FORT BELVOIR, VA 22060-5806			BUI-PHO, PASCAL M	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

10/804,005

Applicant(s)

ALMEIDA, LEO A.

Examiner

Pascal M. Bui-Pho

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **integrated circuit** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because the applicant fails to include a description of **Figures 1a, 2a, and 3c** in the specifications. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the

immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being vague in its given context. The intended scope of the claimed invention is unclear.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Simpson et al. (US 5,965,873).

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With regards to claim 1, Simpson et al. disclose a multispectral focal plane array comprising a linear array of photodetectors (20), each photodetector in the linear array having a distinct spectral response; and an integrated circuit coupled to a read out of the linear array, wherein the integrated circuit collects electrical signals from the individual photodetectors (Columns 4 and 10).

With regards to claim 3, Simpson et al. disclose a multispectral focal plane array wherein the photodetectors are, either photodiodes or photoconductors (Column 4).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 2, 4, 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Taylor et al. (US 6,803,557).

With regards to claim 2, Taylor et al. disclose a multispectral focal plane array comprising a two-dimensional array of photodetectors (Fig. 11B) having groups of photodetectors, each group having a distinct spectral response; and an integrated circuit coupled to a read out of the two-dimensional array, wherein the integrated circuit collects electrical signals from the photodetectors (Columns 4, 10-11 and 13-14).

With regards to claim 4, Taylor et al. disclose a multispectral focal plane array wherein the photodetectors are, either photodiodes or photoconductors (Column 4).

With regards to claim 6, Taylor et al. disclose a multispectral focal plane array wherein the photodetectors are fabricated from ternary or quaternary compound semiconducting materials whose band-gap varies through a grading of the chemical composition of the photodetector (Column 6).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5, 7, 9, 11, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson et al. (US 5,965,873).

With regards to claim 5, although Simpson et al. fail to specify the type of material and/or a specific manner of forming/making the photodetector array, selecting a particular known available type of material and/or a specific manner for making/forming of photodetector array would have been obvious to one of ordinary skill in the art in order to provide a flexible amount of cost for making the photodetector array without altering the basis performances of the array. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Simpson et al. accordingly, if so desired.

With regards to claims 7, 11, 13, and 15, further limitations would have also been obvious for similar reasons set forth above.

With regards to claim 9, as understood by the Examiner, although Simpson et al. fail to specify the type of photodetector forming/making the photodetector array, selecting a particular

known available type of photodetector for making/forming of the photodetector array would have been obvious to one of ordinary skill in the art in order to provide greater system efficiency.

11. Claims 8, 10, 12, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al. (US 6,803,557).

With regards to claim 8, although Taylor et al. fail to specify the type of material and/or a specific manner of forming/making the photodetector array, selecting a particular known available type of material and/or a specific manner for making/forming of photodetector array would have been obvious to one of ordinary skill in the art in order to provide a flexible amount of cost for making the photodetector array without altering the basis performances of the array. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Taylor et al. accordingly, if so desired.

With regards to claim 10, as understood by the Examiner, although Taylor et al. lack a clear inclusion of any specific height and/or specific detection capability of it in term of wavelength as recited, it would have been inherently included, however, if not, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Taylor et al. accordingly in order to provide more control to each of the photodetectors in the array in accordance with its color detection performance.

With regards to claims 12 and 14, further similar citations would have also been obvious for similar reasons set forth above.

With regards to claim 16, Taylor et al. disclose a multispectral array wherein the ternary or quaternary compound semiconducting material system is formed of  $\text{Hg}_{1-x}\text{Cd}_x\text{Te}$ , wherein the band gap of  $\text{Hg}_{1-x}\text{Cd}_x\text{Te}$  varies with chemical composition (x value).

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pascal M. Bui-Pho whose telephone number is (571) 272-2714.

The examiner can normally be reached on Monday through Friday: 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

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